

APPENDIX G: REQUIREMENTS MANAGEMENT RESOURCES

To undertake “Performing Requirements Management Step 1, Identify and Capture Requirements,” the practitioner must gather data from many sources. Section 4.3.2, Inputs to Requirements Management, lists many types of data and suggests some sources where the required data may be found. This appendix lists additional sources of data that may be consulted during the Identify and Capture Requirements process step. While this is not a complete list of sources, it identifies the major sources of data, guidance, and direction that are specific to FAA requirements identification.

This appendix lists FAA, Department of Defense, international, and industry standards, handbooks, and specifications that may be invoked by a requirement. It also lists FAA orders that state FAA policy that may result in specific requirements being mandated.

G.1 Sources of Documents

G.1.1 FAA Specifications and Standards

All current FAA specifications and standards under FAA configuration management are listed in NAS-MD-001 National Airspace System Master Configuration Index. NAS-MD-001 is available on the FAA Configuration Management Web site (<http://www.faa.gov/cm/cmdox.htm>)

G.1.1.1 Documentation Control Center

FAA specifications may be obtained from the NAS Documentation Control Center (DCC) located at 600 Maryland Avenue, SW., Washington, DC 20024. The telephone number is 202-548-5502. All specifications are available in hard copies, and many are available electronically.

G.1.1.2 FAA Web Site Sources

G.1.1.2.1 FAALC

Many FAA specifications are available on the FAA Logistics Center Digital Document Library Web site (<http://evr.jccbi/evr/faa.asp>). Only the most recent edition is available for download.

G.1.1.2.2 Documentation Control Center

The DCC maintains a Web site (<http://nasdocs.faa.gov>) that includes most FAA Standards, the FAA-G-2100 specification, and the complete set of NAS Requirements documents, including NAS-SR-1000, NAS-DD-1000, and NAS-SS-1000.

G.1.1.2.3 Air Traffic Organization (ATO) Standards

The ATO System Engineering and Architecture directorate maintains a Web site (<http://www.faa.gov/asd/standards>) containing many FAA standards.

G.1.2 Department of Defense (DOD) Specifications and Standards

All current DOD specifications and standards are available through a Defense Standardization Program that supplies electronic copies of many specifications, standards, handbooks, and other documents (<http://www.dsp.dla.mil>).

G.1.3 FAA Directives

FAA Order WA 0000.5E describes the Washington Headquarters Directive Checklist implemented by the FAA Directives Management Information System (DMIS). Hard copies of FAA orders may be obtained by mail or fax only. Submit FAA Form 1720-11, Publications Request," to:

U.S. Department of Transportation
Subsequent Distribution Office, SVC-121.23
Ardmore East Business Center
3341Q 75th Avenue
Landover, MD 20785
FAX (301) 386-5394

FAA Form 1720-11 is available from the FAA Electronic Document Systems (FEDS) at <http://feds.faa.gov>.

Although there is no single source for electronic copies, many FAA orders are available on specific FAA Web sites, as described in the following paragraphs.

G.1.3.1 Directives Management Information System

The DMIS is the official source for FAA regional and national directives. The DMIS is a Web-based application with a centralized database and repository that maintains information about local and national directives. Many FAA orders are available for download at the DMIS Web site (<http://dmis.faa.gov>).

G.1.3.2 Technical Operations Orders

FAA orders that relate to operation and maintenance of NAS systems are available at the FAA Technical Operations Services Web site (<http://atowdirectives.faa.gov>).

G.1.3.3 Systems Operations Orders

FAA orders that relate to air traffic operations are available at the Air Traffic publications Web site (<http://faa.gov/atpubs>).

G.1.4 Industry Specifications and Standards

Many industry specifications and standards are available as both hard and electronic copies from industry associations. Most industry specifications and standards are available for purchase. Industry standards and many government and military standards are available at Global Engineering Documents (<http://www.global.ihs.com>). The standards include:

1. RTCA Minimum Operational Performance Standards and Minimum Aviation System Performance Standards are available at <http://www.rtca.org>.
2. Institute of Electrical and Electronic Engineers (IEEE) standards are available at <http://ieee.org>.
3. National Fire Protection Association (NFPA) standards are available at <http://nfpa.org>.
4. Electronic Industries Alliance (EIA) standards are available at <http://www.eia.org>.
5. Telecommunications Industries Association (TIA) standards are available at <http://www.tiaonline.org>.

G.1.5 Government Regulations and Statues

Government regulations and statues that apply to FAA requirements are available at the FAA Acquisition System Toolset (FAST) under the External Authorities tab at <http://fast.faa.gov>.

G.1.6 International Standards

International “Standards and Recommended Practices” are available from the International Civil Aviation Organization (ICAO) (<http://www.icaodsu.openface.ca/mainpage.ch2>).

G.2 Document Listing Description

This section describes each column on the Document Listing Description (Table G-1).

G.2.1 Document Type

This field may include the following document types:

- Standard
- Specification
- FAA Order
- Handbook

G.2.2 Document Number

This is the complete number used to identify the document by the issuing entity.

G.2.3 Revision

This is the revision level of the document. It is normally the most recent version.

G.2.4 Date

This is the date that the document was issued. For FAA documents, it is the date that the document was approved by the approving authority.

G.2.5 Title

This is the complete title of the document.

G.2.6 Description

This is a brief summary of the document.

G.2.7 OPI

The OPI field describes the Office of Primary Interest. For FAA documents, this is the FAA organizational element that issued the document and is responsible for maintaining and updating it. NAS-MD-001 lists the OPI for documents under configuration management.

G.2.8 Notes

This field explains why the document is important in the requirements management process. It may give examples of what areas of the document may be used in the "Identify and Capture" requirements step in the Requirements Management process.

Table G-1. Document Listing Description

Document Type	Document Number	Revision	Date	Title	Description	OPI	Notes
Standard	FAA-STD-001	b	3/4/1976	Color and Texture of Finishes for NAS Equipment	Describes standards for finishes for NAS equipment		This standard is invoked when procuring NAS equipment that is a new design. It would not normally be used in COTS or NDI procurements.
Standard	FAA-STD-002	e	9/21/1999	Engineering Drawing Preparation and Support	Sets standards for the preparation and revision of all FAA facility architectural and engineering drawings. Describes CAD requirements, etc	AFZ-700	If you are doing any facility modifications then you will need to reference this standard.
Standard	FAA-STD-005	e	8/1/1996	Preparation Of Specifications, Standards and Handbooks	Describes required content and format of FAA Specifications, Standards, and Handbooks	ASD-120	This standard describes the form and format for FAA specifications and standards. It references MIL-STD-961d and MIL-STD-962c.
Standard	FAA-STD-012	a	6/16/1969	Paint System for Equipment	Describes preparation standards for painting and finishing NAS Equipment		This standard is used in conjunction with FAA-STD-001b.
Standard	FAA-STD-013	d	6/15/1994	Quality Control Program Requirements	This standard establishes the minimum requirements for a quality control program to be established and maintained by FAA contractors for furnishing supplies and services.	ASU-430	This standard is current but is being replaced by ISO 9000 procedures and documentation. Check with ASU-430 before using.

Standard	FAA-STD-016	a	9/21/1987	Quality Control System Requirements	This standard establishes the minimum requirements for a quality control system to be established and maintained by FAA contractors for furnishing supplies and services.	ASU-430	This standard is current but is being replaced by ISO 9000 procedures and documentation. Check with ASU-430 before using.
Standard	FAA-STD-018	a	9/30/1987	Computer Program Quality Program Requirements	This standard establishes the minimum requirements for a computer software quality program to be established and maintained by an FAA contractor for furnishing computer software and related documentation.	ASU-430	This standard is current but is being replaced by ISO 9000 procedures and documentation. Check with ASU-430 before using.
Standard	FAA-STD-019	d	8/9/2002	Lightning and Surge Protection, Grounding, Bonding and Shielding Requirements for Facilities and Electronic Equipment	Defines standard configuration and procedures for lightening and surge protection, grounding, bonding and shielding practices for FAA facilities housing electronic equipment and FAA electronic equipment.	AOS-100	This standard now combines the older versions of FAA-STD-19 and FAA-STD-20 into one document. It now describes lightening and surge protection and grounding bonding and shielding requirements for both facilities and equipment. Older versions of these standards are still in use on current contracts. New contracts will use FAA-STD-19d.

Standard	FAA-STD-020	b	5/11/1992	Transient Protection Grounding, Bonding and Shielding for Electronic Equipment	Defines requirements for the application of transient protection, grounding, bonding, shielding and personnel protection practices of electronic equipment. Also defines EMI requirements.		This standard has been superceded by FAA-STD-19d. Older versions of this standard are still in use on current contracts. New contracts will use FAA-STD-19d.
Standard	FAA-STD-024	b	8/22/1994	Content and Format Requirements for the Preparation of Test and Evaluation Documents	Defines the minimum content and format requirements for the preparation of all required T&E documentation.	ASD-100	This standard is still current but is being superceded by AMS templates.
Standard	FAA-STD-025	e	Check	Preparation of Interface Documentation	Defines the format and content of Interface Requirements Documents (IRDs), Interface Control Documents (ICDs), and Interface Revisions (IR's)	ASD-100	If the government or a vendor is producing an IRD or ICD this standard shall be followed.
Standard	FAA-STD-026	a	6/1/2001	Software Development for the National Airspace System	Defines and establishes NAS software development requirements.	ASU-250	Software developed under FAA contract shall adhere to the requirements in this standard.
Standard	FAA-STD-028	c	11/16/2000	Contract Training Programs	Defines and establishes requirements for contractor developed and delivered training.		Training developed under FAA contract shall adhere to the requirements in this standard.

Standard	FAA-STD-029	d	12/22/1995	Selection and Implementation of Telecommunications Standards	Defines telecommunications standards to be used by the FAA in the preparation of specifications and related procurement documents, which are used when leasing or purchasing telecommunications systems, services, or equipment.		Although this standard has not been updated recently it still contains useful data.
Standard	FAA-STD-039	b	5/1/1996	National Airspace System (NAS) Open System Architecture and Protocols	Specifies a minimal set of protocol and service requirements to be used by FAA to develop interface requirements for data communications in the NAS.	ASD-120	
Standard	FAA-STD-42	Org	5/5/1994	National Airspace System (NAS) Open Systems Interconnection (OSI) Naming and Addressing	Defines requirements for Open System Interconnection (OSI) names and addresses within the NAS.	ASD-120	Currently being updated.
Standard	FAA-STD-043	a	5/10/1994	National Airspace System (NAS) Open System Interconnection (OSI) Priority	Defines and establishes the required priority indicators to be used when utilizing the priority option of the Open Systems Interconnection (OSI) protocols while exchanging messages between NAS open end-systems.	ASD-120	

Standard	FAA-STD-045	Org	11/21/1994	Open Systems Interconnection Security Architecture, Protocols and Mechanisms	Defines approved protocols and mechanisms for ensuring secure data communication within the NAS.	ASD-120	Currently being updated.
Standard	FAA-STD-047	Org	12/29/1993	National Airspace System (NAS) Open System Interconnection (OSI) Conformance Testing	Defines requirements for ensuring that vendor-supplied Open Systems Interconnection (OSI) products conform to the NAS OSI requirements specified in FAA-STD-039.	ASD-120	
Standard	FAA-STD-048	Org	7/7/1995	National Airspace System (NAS) Open System Interconnection (OSI) Interoperability	Defines requirements for ensuring that peer vendor OSI products conforming to FAA-STD-039 and FAA-STD-047 are able to interoperate correctly with each other.	ASD-120	
Standard	NFPA 70		6/27/1905	National Electrical Code	Defines the National Electrical Code requirements that must be followed in FAA equipment and installations.		Most applicable equipment requirements from the NEC are specified in FAA-G-2100.
Specification	FAA-C-1217	F		FAA Specification Electrical Work, Interior			
Specification	FAA-C-1244	Org		Installation of Engine Generators and Fuel Tanks			
Specification	FAA-C-2812	Org		Fuel Storage Tanks, Underground			

Specification	FAA-D-2494			Technical Instruction Book Manuscript: Electronic, Electrical and Mechanical Equipment, Requirements for Preparation of Manuscript and Production of Books	The FAA specification that defines the form and format of Technical Instruction books.		
Specification	FAA-E-2003			Cable Control, Shielded Pairs, Interior			
Specification	FAA-G-2100	g		Electronic Equipment, General Requirements	The FAA specification that defines the design and construction requirements for FAA equipment, including requirements for electrical, mechanical, safety, seismic, power, etc.	ASD-120	This is current and being updated continually. The requirements apply to Development Items, Non Development Items and Commercial Off the Shelf equipments to be used in FAA facilities. It's use mandatory in some areas and highly recommended in others
Specification	NAS-SR-1000	16		System Requirements Specification	The FAA document that defines the operational requirements and is the approved document for operational requirements for the NAS. This document serves as a source document for system specification preparation.	ASD-120	All FAA requirements trace to this document. If they don't it will be hard to justify the system.

Specification	NAS-DD-1000			Level 1 Design Document	The FAA document that defines the functional architecture including basic NAS elements, sub-elements, subsystems and their interrelationships	ASD-120	
Specification	NAS-SS-1000			NAS System Specification", Volume 1 through 5	The FAA document that defines functional, performance, design, construction, logistics, personnel and training, documentation, verification and interface requirements for the NAS.	ASD-120	
Handbook	FAA-HDBK-001	Org	9/30/1997	Design Handbook for Energy Efficiency and Water Conservation in NAS Facilities	This handbook describes definitive energy efficiency and water conservation design criteria for the design of NAS facilities. It provides implementation strategies and tools to comply with E.O. 12902, <u>Energy and Water Conservation at Federal Facilities</u> , which was issued on March 8, 1994.		
Handbook	FAA-HDBK-002	Org	6/27/1997	System Management			
Handbook	FAA-HDBK-003			NAS Open System Environment (OSE) Application Services			
Handbook	FAA-HDBK-004			NAS Internet Protocol Suite			
Order	0000.5	E	5/31/2001	Washington Headquarters Directives Checklist	An index of all current and cancelled FAA Orders		

Order	1010.51	A	3/8/1971	Selection Order: U.S. National Aviation Standard for the Mark X ATCRBS Characteristics	Describes the signal in space characteristics of the ATCRBS system.	AND-450	
Order	1050.17		1/5/1994	Airway Facilities Environmental and Safety Compliance Program			
Order	1100.145	B		Program Technical Report (PTR) Procedures	Describes the FAA procedures for managing ATC operational software problems.		When contractor developed software is turned over to the FAA for maintenance this procedure will be used to track PTRs.
Order	1100.157	A	6/1/2001	National Systems Engineering Divisions Maintenance Program Procedures, Operational Support		AOS-1	
Order	1200.22	B	8/1/1999	Use of National Airspace System (NAS) Computer and Radar Data or Equipment by Outside Interests	Describes procedures for making radar and automation system data available to non-FAA users.	ATO-120	
Order	1320.1	D	12/1/2001	FAA Directives System	Describes the procedures for producing FAA Orders.		
Order	1320.37	A	12/1/2001	Contractor Development Equipment Instruction Books		AOS-1	
Order	1320.41		1/1/2001	Review and Validation of Equipment Instruction Book Manuscripts		AOS-1	
Order	1320.58		12/1/01	Equipment Facility Directives - Modification and Maintenance Technical Handbooks		AOS-1	

Order	1320.59		5/1/01	Coordination of Directives with an Airway Facilities Organization			
Order	1370.66	B	5/1/1992	Aviation Safety Analysis System: Location Identifier Codes	A list of all FAA Location ID's.	APR-300	A handy reference.
Order	1370.82		6/9/2000	Information Systems Security Program	Describes the FAA policy on information systems security.	AIO-1	Any information system must follow the policies described in the Order.
Order	1375.1	B	11/17/1980	Data Standards		AIO-300	
Order	1600.66			Telecommunications and Information Systems Security Policy			
Order	1600.69	A	5/15/2001	FAA Facility Security Management Program	Describes the physical security policy at FAA facilities.	ACO-400	
Order	1600.72		4/4/2001	Contractor and Industrial Security Program		ACP-300	
Order	1600.73		11/30/2001	Contractor and Industrial Security Program Operating Procedures		ACP-300	
Order	1750.6	A	11/17/1975	NAS Documentation Facility	Describes the operation of the NAS Documentation Facility at the WJHTC.	ACT-70	FAA and contractors may obtain NAS documentation at this facility.
Order	1800.66		11/29/1999	Configuration Management Policy	Describes the NAS Configuration Management procedures and practices.	ACM-20	
Order	1830.2	B	8/4/1987	Telecommunications Standards Selection and Implementation Policy		AOP-600	

Order	1830.3	A	9/21/1992	Telecommunications Management and Operations Policy		AOP-600	
Order	1830.6	B	8/20/1998	Telecommunications Asset Management		AOP-600	
Order	3000.10	A	5/8/1985	Airway Facilities Maintenance Technical Training Program		AFZ-100	
Order	3000.22		5/1/1998	Air Traffic Service Training		ATS-7	
Order	3900.19	B	4/29/1999	Occupational Safety and Health Program		AEE-200	
Order	3400.3	G	4/13/1998	Airway Facilities Maintenance Personnel Certification Program		AFZ-100	
Order	4140.1	A	2/4/1998	Integrated Material Management Program		AFZ-500	
Order	4250.9	B	1/24/1992	Field Material Management and Control		AFZ-500	
Order	4153.1	B	1/17/1992	Quality Assurance of Material Procured by FAA		ASU-400	
Order	4500.3	D	1/12/1998	Federal Catalog and Standardization Program		AFZ-500	
Order	4560.1	B	3/10/1989	Policies and Procedures Covering the Provisioning Process During the Acquisition of FAA Material		AFR-100	
Order	4630.2	A	7/9/1987	Standard Allowance of Supplies and Working Equipment for NAS Facilities		ARS-1	
Order	4630.8		10/27/1987	Quality Assurance Policy		ASU-150	
Order	4650.7	A	5/22/1991	Management of NAS F&E Project Material		AFZ-500	

Order	4650.16	B	7/1/1987	Nationally Furnished Project Materiel Procured by the Washington Headquarters		AAD-50	
Order	4650.20	A	12/4/1974	Reporting and Replacement of Items Failing Under Warranty		ASU-130	
Order	4650.30		5/4/1993	Management and Control of NAS F&E Projects/Materiel		AFZ-500	
Order	4650.31		6/29/1993	Vendor Shipments of National Furnished Operations-Funded Material		AFZ-500	
Order	4800.2	C	5/31/1996	Utilization and Disposal of Excess and Surplus Personal Property		AFZ-500	
Order	6000.10		6/1/1982	Airways Facilities Service Maintenance Program		AFR-100	
Order	6000.15	C	8/11/2000	General Maintenance Handbook for Airways Facilities		AOP-300	
Order	6000.18		8/11/1971	Field Repair of Equipment		ARF-100	
Order	6000.25		6/1/1977	Design and Construction of FAA Facilities		ANS-200	
Order	6000.30	C	1/25/2001	National Airspace System Maintenance Policy		AOP-300	
Order	6000.38		5/24/1991	Policy to Determine NAS Equipment Sparing Requirements for Airway Facilities Work Center		AFR-100	
Order	6000.50	A	12/17/1996	Airway Facilities National System Operations Handbook		AOP-100	
Order	6030.20	E	10/5/1989	Electrical Power Policy		ANS-600	

Order	6030.45	A	12/30/1992	Facility Reference Data File		AOP-300	
Order	6040.15	D	11/20/1999	National Airspace Performance Reporting System			
Order	6050.19	E	6/30/2000	Radio Spectrum Planning		ASR-200	
Order	6090.1	B	3/26/2000	National Airspace System Managed Subsystems Development and Implementation		AUA-700	
Order	6950.2	D	10/1/1998	Electrical Power Policy Implementation at National Airspace System Facilities		ANS-600	
Order	6950.3		11/1/1960	Plant Structures and Ground Modification Electrical		AOS-200	
Order	6950.11	A	3/14/1972	Reduce Electrical Power Interruptions at FAA Facilities		ANS-600	
Order	6950.19	A	7/1/1996	Practices and Procedures for Lightning Protection Grounding, Bonding, and Shielding Implementation		ANS-600	
Order	6950.20		7/28/1978	Fundamental Considerations of Lightning Protection, Grounding, Bonding and Shielding		ANS-600	
Order	6950.25	A	7/2/1998	Power Conditioning Devices at FAA Facilities		ANS-600	
Order	6950.27		10/3/1994	Short Circuit Analysis and Protective Device Coordination Study		ANS-600	
Order	6980.24	A	7/12/1988	Battery Theory and Selection Guidelines		ANS-600	

Order	6980.26		6/15/1983	Battery Backup Power Systems -Theory and Selection Guidelines		ANS-600	
Order	7110.65	M	10/28/1999	Air Traffic Control		ATP-100	
Order	8150.1	A	9/21/1987	Technical Standard Order Procedures		AIR-120	
Executive Order	12088			Federal Compliance with Pollution Control Standards		Executive Office of the President	All FAA systems must comply with the requirements in this EO.
Executive Order	12873			Federal Acquisition, Recycling, and Waste Prevention		Executive Office of the President	All FAA systems must comply with the requirements in this EO.
Executive Order	12902			Energy Efficiency and conservation at Federal Facilities, and the Energy Policy Act of 1992		Executive Office of the President	All FAA systems must comply with the requirements in this EO.